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Charles W. Allen, M. D.,

New York.

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TREATMENT OF RINGWORM OF THE SCALP IN INSTITUTIONS.*

By CHARLES W. ALLEN, M. D.,
New York.

I MUST express to you the gratification I feel in being privileged, through the courtesy of your worthy presiding officer, to participate in the discussion which he has so ably and instructively opened upon the interesting topic of Ringworm of the Scalp.

Since the subject will be approached from many different sides by the various speakers, I shall endeavor to keep well within prescribed bounds in giving you my views upon the proper management of trichophytosis capitis as it occurs among the inmates of various institutions in which large numbers of children are gathered together.

The management of trichophytosis capitis in schools, asylums, hospitals, or any other institutions in which children are received and mingle with others, must of necessity differ from the treatment of a single case, or even of a number of cases, in the family.

In the first place, we have the protection of other inmates to claim our most careful consideration, and therefore facilities must be provided for immediate and perfect isolation. Secondly, those who have almost recovered must be kept apart from the new cases, in which the disease is more acute, more active and more likely to be transmitted. It is not sufficient for prompt eradication of an epidemic of ringworm from an institution that the cases of the disease be kept by themselves. Some are more susceptible of rapid

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cure than others, but unless they are removed at a time when a cure seems to have been effected, they run the danger of becoming contaminated anew. Nor are we justified in returning these apparently cured cases to their former surroundings amid healthy children until they have undergone a period of probation in a non-infected place of isolation and observation.

In such institutions as exist for the reception and care of ringworm cases in common with other affections of childhood—that is, where they are admitted as ringworm cases, or as medical or surgical cases having ringworm incidentally, or in institutions established for the reception of sick and well alike, the former being kept as inmates after they are cured and have ceased to be patients—the conditions are more complicated, and the situation is correspondingly beset with difficulties. We must consider, then, the question of management as it affects :

1. The day-school and factory.
2. The boarding-school, home and asylum.
3. The children's hospital proper.

The discovery of scalp ringworm in a pupil of a public or private day-school, or in an employee of a factory or place of business where numbers of young people are employed, should be sufficient to exclude such a subject from further association with his companions until a thorough cure has been effected and sufficient time has elapsed to insure its permanency. The same course should be pursued in boarding-schools, homes and asylums ; but here, instead of sending the patient home, where the parents are expected to take the necessary measures to bring about rapid cure, it often becomes necessary to provide the proper isolation and hospital treatment. Few boarding-schools receive children at an age when they are so likely to contract and disseminate this disease. Orphan asylums, on the contrary, present all the most favoring conditions for the development of epidemic outbreaks. Children of all ages and states of health are often received, and contagious skin diseases do not debar them from admission.

Every infant asylum, at least, should therefore be provided with proper quarters for the isolation of these contagious cases. Such quarters need not be large, for if they are properly made use of no great number of cases to occupy them will ever exist as a result of spreading. They should, however, be arranged in such a way that the cases can be graded according to the various stages, if not in accordance with the different varieties of the disease and kept apart from each other, in a measure at least. A single isolation ward is

not sufficient. There must be in addition one or more observation wards for cases apparently cured, where they may be kept apart from the healthy inmates, while at the same time they are removed from the possibility of reinfection.

Such quarters as I have spoken of should be so constructed that they can be readily, rapidly and radically disinfected. The walls, ceilings and floors should be of a material which can at all times be washed and easily kept clean. In institutions long established in which repeated epidemics have occurred over a period of years, it is possible that the quarters used for the care and isolation of patients have become themselves so infested with the fungus growths that they are constant sources of infection, and should no longer be used for such purposes.

In children's hospitals special separate wards should exist for such cases, and trichophytic patients should not mingle with the inmates in general.

To avoid the inadvertent admission of hidden ringworm, the closest scrutiny of the heads of new patients should be a routine practice, since prophylaxis is of paramount importance. An untreated case in an active stage is sufficient to start a rapidly-spreading epidemic.

The rule which prevails in penal institutions of cutting the hair close to the scalp upon admission should be applied with much greater reason to hospitals, asylums and children's institutions generally.

In a large series of examinations for admission to such places, as many as eight ringworm cases have been detected in a hundred applicants, showing how necessary such prophylactic measures are. Some institutions, which stop at no trouble or expense to check an epidemic once started, do practically nothing in the way of preventing such a start. The management takes pride, if not pleasure, in curing disease, but does not pause to realize that it may be engaged in the business of making sickness. The layman, even though a trustee or director of such institutions, has often not been instructed out of his ignorant belief that ringworm is a slight affection.

Another prophylactic measure is the exclusion of the patent clipper from the toilet armamentarium of the institution. I thoroughly believe that this time and skill-saving device has done more for the dissemination of contagious scalp diseases than any other single factor.

I do not doubt in the least that this instrument can be used with little or no danger of spreading the germs, but that it ever is so used

in large institutions by the class of attendants to whom the hair-cutting is usually confided, I seriously question.

Even the scissors should be sterilized or disinfected before being used on a second case.

Now, as to the management of the individual cases and their medicinal treatment, let me premise with the statement that so far as I am aware there exists at the present moment no such thing as a rapid cure for chronic ringworm of the scalp.

When I read in the public press that in an institution in New York City where about 375 cases of this disease existed at one time, recently, the physician in charge was accused of incompetency because he did not cure the cases rapidly and stamp out the epidemic at once, I felt pretty confident, from my own past experience, that the institution authorities were not doing their part in supplying adequate facilities for proper isolation, and this has since been shown to have been the case. The further statement was made that so soon as a competent man was put in control the epidemic vanished in a few weeks. Concerning this statement, I knew that either the physician first in charge had been sufficiently competent to bring the cases to the verge of recovery before he was supplanted, or that in reality the epidemic still existed, the cases having simply been put into a sufficiently presentable shape to pass muster, since no means at our command are capable of working so wonderful a transformation within a space of a few weeks. Upon inquiry, I found that the newspaper information contained, as it often does, a large percentage of misinformation, hence I was drawing conclusions from faulty premises. The epidemic had developed gradually. There had always been a few cases, but in March, 1895, it was supposed that they were all cured. Clippers were used indiscriminately for hair cutting. Six months later there were about 360 cases. The physician advised isolation. The management claimed that they could keep the children apart at table and in the dormitories, but not in the play-grounds.

It is not surprising that such isolation resulted in no abatement. It was at this period that a specialist was lled in. He, however, wisely refused to undertake the task unless the afflicted were carefully separated from the well. This having been done, energetic treatment was instituted, and after a period of three or four months the epidemic was considered at an end. Such disagreeable experiences could be avoided if managing boards would not insist upon usurping the prerogatives of the medical board and those of the medical attendants, and would devote more attention to the carrying

out of the physician's recommendations. It is so much easier and cheaper to isolate a few cases absolutely at first than it is to attempt the same thing after the number has run into the hundreds.

A personal experience embracing a number of children's institutions with which I have been regularly connected and others to which I have been occasionally called at times when ringworm has prevailed has taught me that painstaking supervision and almost daily inspection of the cases is a necessity, no matter how willing and faithful the attendants, dressers, nurses or care-takers may be. They must be taught and retaught not only what to do but when to stop doing it. Over-treatment is often as much to be guarded against as lack of attention. If too much irritation is produced it may cause just those conditions which are favorable to spread and persistence of the disease. Continued irritation may lead to a state of the scalp more difficult to cure than the affection in its original form.

The intelligent command of an experienced physician, with orders changed or modified from day to day to suit the various cases, must be credited with a large share of the success when a campaign against this enemy results in short and decisive victory. Besides the form of medication to be chosen and the mode and duration of its application there comes up the important question of when a patient can be taken from among the ringworm cases and placed in the observation ward or intermediary quarantine, and the still more important one of when it can safely be permitted to rejoin its healthy companions.

The relative value of the multitude of drugs which have at one time or another been advocated is not always readily determined because of the very great difference in behavior of different cases under any treatment. In estimating their worth, too, one is apt to lose sight of the condition of the patient; one patient furnishing by reason perhaps of a strumous state a soil which the fungus is most loath to quit, while another is in such a state of general good health that the trichophyton seems incapable of securing a lasting foothold.

I do not mean to say that apparently healthy children exposed to the contagion will wholly escape. There is, however, something which permits some to escape most lightly, while infection from the same source and caused by the same variety of trichophyton produces its most severe effects in others. There must too be some quality of soil in the infant as in the adult which is unsuitable for the fungus' growth. If this quality could be determined and supplied, by diet or otherwise, children of the ring-worm age they too

might have immune. Strumous appearing, pale, lymphatic, poorly nourished children would surely seem to present a condition of scalp most favorable to rapid spread, and these should surely receive such internal remedies as cod liver oil and some of the iodine preparations.

I would not go so far as some of our homeopathic brothers who advocate exclusive internal treatment, but I believe I have seen good results from diet and internal medication, and I always advise keeping these children as much as possible in the open air and sunlight, believing that indoor life, especially if the rooms are dingy, greatly favors rapid growth of this as it does of other moulds.

Again, the form of local treatment to be adopted varies somewhat according as the ringworm is disseminated or diffuse, i. e., in one or more large patches, or perhaps occurring in numerous small spots.

In any event the hair is cut short with barbers' shears or the scalp is shaved. This is necessary for girls as well as boys in institution life, since it not only facilitates treatment but permits of the necessary observation and oversight. The scalp is then best washed with bichloride, and, if open wounds are absent, such a solution as the following can be employed : Bichloride, 1 ; alcohol, 100 ; water, 500.

Most of the remedies recommended are parasiticides, and many contain mercury in one form or another. One which we have found to act well at the Randall's Island Infant Asylum has the following composition :

℞ Hydrarg. Bichl. gr. x.
Bals. Peru, ʒ iii.
Oli. lavandulae, ʒ i.
Spt. vini Rect. ad., ℥ i.

This can naturally be applied to a patch of limited extent only.

Another, which is almost always of marked benefit for a time, is composed of :

℞ Sulphur, ℥ i.
Hydrarg. ammon, ʒ iv.
Bals. Peru, ʒ iii.
Lanolin.
Vaselin, āā ℥ ii.

Care must necessarily be exercised in any of these stronger mercurial preparations.

A non-mercurial solution which I introduced at this institution

and which had the effect of clearing the surface rapidly of evidences of the disease, was composed of:

Menthol,	gr. 10.
Thymol,	gr. 10.
Chloroform,	℥ xxx.
Water,	ʒ i.

Another was:

℞ Hydrarg. nitratis.
Ichthyol, āā ʒ i.
Collodion, ʒ i.

or

Thymol,	2,
Chloroform,	8,
Ol. Oliv.,	24,

as proposed by Morris.

Another plan somewhat employed was to cover the scalp with a sufficiently large piece of spread mercurial plaster. After securing a certain amount of irritation by these means it is better to withhold entirely such strong remedies and resort for a season to the blandest topics until the inflammation has subsided. Then the same, or, often better, another equally powerful parasiticide remedy is to be reapplied. After various attempts with various methods, naturally used in connection with strict cleanliness, the hair being made short by cutting or shaving, shampooings, antiseptic washes, etc., I have come to the conclusion—which is one also reached by a number of observers—that chrysarobin is to-day the best drug at our command for securing an efficient and prompt effect. It has its disadvantages, which are well known. It is uncleanly both for the patient and for bed linen and clothing. It is liable to produce dermatitis and staining of the skin, and if care is not exercised it may affect the eyes disagreeably. Still it is the best drug we possess, and in employing it recently in about ninety cases I was enabled to obviate most of the disagreeable effects by exercising due care, first in its application, and secondly in preventing its being spread to other parts by the patients themselves through advertent rubbing and distributing it. There are various ways of minimizing this disadvantage by caoutchouc and other caps or head dressings, and the suggestion has been made to fasten such a cap securely over the forehead by means of a rubber or adhesive bandage, and only raise the cap from behind to make application of subsequent dressings. Although my patients wore caps chiefly to protect the pillows, I incorporated the drug in collodion, proportion of one drachm to one or

two ounces, and this was painted on over the shaven scalp wherever patches of disease were to be seen, and renewed as often as it became loosened or detached. Perhaps the action is somewhat slower than when ointment is applied, but I could never convince myself that the benefit of shutting off the air, partially at least, from the diseased areas by the collodion was not of decided benefit in itself, because of the well known aerobic nature of the fungus. I will not enter further into the discussion of the merits of particular formulæ, since these questions will be considered by others, but my belief is that occlusion has much to do with the success of any plan. I realize that this is partially effected by certain pommades and plasters, but not so fully as by the collodion occlusive dressing.

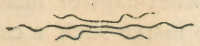
Should these cases be epilated?

Yes, if it can be done with proper skill, care and intellgence, and especially if the cases are few and the patches small, but, to start in to epilate several hundred children in whom the disease has manifested itself and secured the upper hand so to speak, the persons charged with the epilation being the ordinary hospital or asylum attendants, is a task much worse than useless.

To become a skillful operator the nurse must be of more than average intelligence and must be especially instructed in the work, so that new foci of disease are not established by the process.

In most institutions the safest plan is probably to cut the hair regularly, say once each week, with barber's shears kept well sharpened and constantly disinfected either by sterilization or by soaking in antiseptic solutions.

Clippers should not be used—for although they may with care be kept clean the probabilities are vastly in favor of their not being. It is probable that the disease has often been spread in asylums and schools by the use of this instrument, which has, I believe, been forbidden in the public institutions in France. Some cases are perhaps better treated if regularly sheared every week, but close clipping usually answers every purpose and the irritation of the hair root is not so marked.



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